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10/579,732	12/05/2006	Masugi Inoue	4035-0179PUS1	8874

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EXAMINER	
DEAN, JR, JOSEPH E	

ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/579,732	INOUE ET AL.	
	Examiner	Art Unit	
	JOSEPH DEAN, JR	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 August 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant amended claim 1.

2. Status of Claims:

Claims 1-6 are pending.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/14/09 has been entered.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims1, 2, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bahl et al. (US20030054818) (hereinafter Bahl), Tsirtsis et al. (US6954442) (hereinafter Tsirtsis), Ohtani et al. (US20030157936) (hereinafter Ohtani), Bahl (US20020095486) (hereinafter Bahl486) and Lin (US20040242240).

Per claim 1, A wireless communications system comprising wireless communication terminals and a wireless communication server, wherein the wireless communications system is able to be connected to at least two kinds of wireless communication networks, simultaneously, two of the wireless communication networks are to be selected as a basic access network and a wireless access network, respectively, and the basic access network deals with both data communications and for signaling communication which continuously changes from one wireless communication to another, and the wireless access network deals with any other communications other than the signaling communication each of the wireless communication terminals comprises a seamless application processing unit for executing connection processing to the basic access network and connection/disconnection processing to and from the wireless access network a basic access network client processing unit having a client function in the signaling communication, a multicast communication node application processing unit for setting multicast reception using at least the two kinds of the wireless communication networks, and respective network devices corresponding to the respective wireless communication networks, and the respective wireless communication terminal identifies the geographical position of the respective wireless communication terminal and informs the wireless communication server of the geographical position of the respective wireless communication terminal; and the wireless communication server comprises a home agent application processing unit for setting a multicast transmission using at least the two kinds of the wireless communication networks, a basic access network

server processing unit for notifying, when the wireless communication networks are continuously switched, the wireless communication terminal of a wireless communication network acting as a switching candidate, for managing the signaling communication for communicating the status of the respective wireless communication terminals there between, and for managing the registration/update processing of the respective wireless communication terminals, a terminal status table for managing the status of the respective wireless communication terminals, a terminal configuration table for managing wireless communication network interfaces implemented in the respective wireless communication terminals, and a preference setting table for managing the order of the wireless communication networks acting as switching candidates when the wireless communication networks are continuously switched, and the wireless communication server updates the geographical of the respective wireless communication terminal, which is obtained from the respective wireless communication terminal, and informs the wireless communication terminal of available wireless networks when the respective wireless communication terminal enters an out-of-service area.

Bahl discloses wherein the wireless communications system is able to be connected to at least two kinds of wireless communication networks (Abstract, paragraph 0027 and 0028**, i.e. infrastructure network and Ad Hoc network**), simultaneously, two of the wireless communication networks are to be selected as a basic access network and a wireless access network (abstract, **i.e. when the mode is switched from operating in the first network [similar to basic access network] to**

operating in the second network [similar to wireless access network]) , respectively, and the basic access network deals with both data communications and for signaling communication which continuously changes from one wireless communication to another (paragraph 0027, **i.e. infrastructure network (IS) is local area network (LAN) that has an access point for communicating with wireless devices, and through the access point the wireless nodes can access the internet through IS network**), and the wireless access network deals with any other communications other than the signaling communication; each of the wireless communication terminals comprises a seamless application processing unit for executing connection processing to the basic access network and connection/disconnection processing to and from the wireless access network (abstract and paragraph 0026, **i.e. mobile device has dual mode switching from first network to second network**), a basic access network client processing unit having a client function in the signaling communication (paragraph 0007, 0028, 0041, 0055 Fig 6, **i.e. access point located in the (IS)/first network directs signaling**), a multicast communication node application processing unit for setting multicast reception using at least the two kinds of the wireless communication networks (paragraph 0041, 0046, 0052, 0055, Fig 6, **i.e. (IS)/first network is where signaling is generated, the poll signals determine if signals are multicast to AH/ second network**), and respective network devices corresponding to the respective wireless communication networks (Abstract, paragraph 0053, **i.e. wireless controller drivers inserted in network stack enables or disables virtual network adapters**), discloses the wireless communication

server comprises a home agent application processing unit for setting a multicast transmission using at least the two kinds of the wireless communication networks (paragraph 0046 **i.e. IS or AH is set in the virtual adapter**), and for managing the signaling communication for communicating the status of the respective wireless communication terminals there between(paragraph 0052, 0055 and Fig 6), but fails to disclose the respective wireless communication terminal identifies the geographical position of the respective wireless communication terminal and informs the wireless communication server of the geographical position of the respective wireless communication terminal; a basic access network server processing unit for notifying, when the wireless communication networks are continuously switched, the wireless communication terminal of a wireless communication network acting as a switching candidate, and for managing the registration/update processing of the respective wireless communication terminals, a terminal status table for managing the status of the respective wireless communication terminals, a terminal configuration table for managing wireless communication network interfaces implemented in the respective wireless communication terminals, and a preference setting table for managing the order of the wireless communication networks acting as switching candidates when the wireless communication networks are continuously switched, and the wireless communication server updates the geographical of the respective wireless communication terminal, which is obtained from the respective wireless communication terminal, and informs the wireless communication terminal of available wireless

networks when the respective wireless communication terminal enters an out-of-service area.

However, Tsirtsis discloses managing the registration/update processing of the respective wireless communication terminals (col. 16, lines 54-66), a terminal status table for managing the status of the respective wireless communication terminals (col. 7, line 66 through col. 8 line 13 and col. 19-31, tables 1-11), a terminal configuration table for managing wireless communication network interfaces implemented in the respective wireless communication terminals (col. 7, line 66 through col.8 line 13 col. 19-31, table 1-11).

Ohtani discloses a basic access network server processing unit for notifying, when the wireless communication networks are continuously switched (page 2 paragraphs 0006, 0014, 0031-0032), the wireless communication terminals of a wireless communication network acting as a switching candidate (page 2 paragraphs 0006, 0014, 0031-0032), and a preference setting table for managing the order of the wireless communication networks acting as switching candidates when the wireless communication networks are continuously switched (page 5 paragraphs 0031-0032, 0077).

Bahl 486 discloses and the respective wireless communication terminal identifies the geographical position of the respective wireless communication terminal and informs the wireless communication server of the geographical position of the respective wireless communication terminal (Abstract, paragraph 0011 and 0012, **i.e. mobile periodically updates local server with location coordinates of the mobile user**),

and the wireless communication server updates the geographical of the respective wireless communication terminal (Abstract), which is obtained from the respective wireless communication terminal, (Abstract)

Lin discloses to inform the wireless communication terminal of available wireless networks when the respective wireless communication terminal enters an out-of-service area (abstract and 0045, **i.e. coverage server determining which communication modes are available geographic location**).

Therefore, one skilled in the art would have found it obvious from the combined teachings of Bahl, which provide dual mode wireless device that operates in two wireless networks, Tsirtsis, provides session signaling apparatus to support mobile nodes capable of moving between domains and access nodes, Ohtani provides a branch candidate selecting method by a mobile station to inform network of switching status, Bahl 486, provide periodic updates to the server for updating location of mobile device, Lin, provides coverage server to support devices out of range by determining communication modes available in geographical region, as a whole to produce the invention as claimed with a reasonable expectation of achieving mobile device that maintains a connection through transitioning between multiple networks and access to servers to assist in finding available networks for seamless communication .

Per claim 2, in the obvious combination, Tsirtsis discloses the wireless communications system wherein: the wireless communication server comprises two servers (col. 6 lines 52-57) of, a home agent server comprising the home agent application processing unit and the basic access network server processing unit (col. 2

lines 42-45), and a resource server comprising the terminal status table, the terminal configuration table (col. 7 lines 66-67 , col. 8 lines 1-13 & table 1-11 i.e. session signaling server access resource and state information); and

the basic access network server processing unit obtains or registers the information in the respective tables of the resource server through a wired or wireless communication network (col. 8 lines 1-13 & table 1-11).

In addition, in the obvious combination, Ohtani discloses the preference setting table (paragraph 0077, Fig 4a).

Therefore, taking the combined teachings of Bahl, Tsirtsis and Ohtani, Bahl486 and Lin as a whole, it would have been obvious to one of ordinary skill in this art at the time of invention by Applicant to incorporate home agent processing unit suggested by Tsirtsis, a preference setting table suggested by Ohtani for the advantages of listing out and providing order to the sequence of events.

Per claim 5, in the obvious combination, Bahl discloses wherein when a user instructs to switch the wireless access network or the basic access network in the wireless communication terminal (Abstract, **i.e. controller driver controls switching to IS or AH network**), after the seamless application processing unit notifies the multicast communication node application processing unit of switching of communication to the basic access network (paragraph 0053), the seamless application processing unit executes processing for changing network connection from the current wireless access network or basic access network to a specified wireless access network or basic access network (paragraph 0053).

Per claim 6, in the obvious combination, Tsirtsis discloses wherein the terminal status table provides information relating to at least the identification symbols of the wireless communication terminals, the basic access network in use, the wireless access network in use, and a multicast communication status (refer to Table 1-11, message content and state information).

Therefore, taking the combined teachings of Bahl, Tsirtsis and Ohtani, Bahl486 and Lin as a whole, it would have been obvious to one of ordinary skill in this art at the time of invention by Applicant to incorporate multicast communication status suggested Tsirtsis for advantages of maintaining updated data.

6. Claim3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bahl et al. (US20030054818) (hereinafter Bahl), Tsirtsis et al. (US6954442) (hereinafter Tsirtsis), Ohtani et al. (US20030157936) (hereinafter Ohtani), Bahl (US20020095486) (hereinafter Bahl486), Lin (US20040242240) as applied to claims 1 or 2 above, and further in view of Hamasaki et al.US2004/0137901 (hereinafter Hamasaki).

Per claim 3, as claimed in any one of claims 1 and 2, in the obvious combination discloses, Bahl discloses wireless communication system wherein the seamless application processing unit of the wireless communication terminal executes connection processing to the basic access network (paragraph 0026, i.e. **moves easily between disjoint networks**), Ohtani discloses the seamless application processing unit executes processing for sequentially trying to connect to a next candidate network (Abstract). The combination fail to disclose, the seamless application processing unit tries to connect to the network with reference to basic access network candidate information that in

advance records the wireless communication networks used as a candidate for the basic access network as well as when the network cannot be connected.

However, Hamasaki discloses wireless communication system wherein the seamless application processing unit tries to connect to the network with reference to basic access network candidate information that in advance records (page 2, paragraph 0016, i.e. the processor predicts when the MT will move to an area covered by the WLAN and based on the prediction, the processor pre-registers the MT with the WLAN so that when the MT enters the WLAN covered area), the wireless communication networks used as a candidate for the basic access network as well as when the network cannot be connected (page 1 paragraph 0006).

Therefore taking the combined teachings of Bahl, Tsirtsis ,Ohtani , Bahl486, Lin and Hamasaki as a whole, it would have been obvious to one of ordinary skill in this art at the time of invention by Applicant to implement seamless application processing unit of the wireless communication terminal executes connection processing to the basic access network, seamless application processing unit executes processing for sequentially trying to connect to a next candidate networks wireless communication system by Ohtani and the seamless application processing unit tries to connect to the network with reference to basic access network candidate information that in advance records the wireless communication networks used as a candidate for the basic access network as well as when the network cannot be connected suggested by Hamasaki for the advantages of sending advance data to focus area with proper connectivity.

Per claim 4, in the obvious combination, Ohtani discloses the wireless communications system wherein when the network device of a wireless communication detects abnormal communication (paragraph 0088) of the wireless access network, after the seamless application processing unit notifies the multicast communication node processing application unit of switching of communication to the basic access network and then switches the communication (refer to explanation in claim 1), the seamless application processing unit tries to connect to a wireless access network acting as a next candidate (refer to explanation in claim 1) with reference to wireless access network candidate information that in advance records the candidates of wireless communication networks used as the wireless access network as well as when the network cannot be connected (refer to explanation in claim 3), the seamless application processing unit executes processing for sequentially trying to do network connection to a next candidate in the condition that the wireless access network is not the same as the basic access network and the basic access network is connected (refer to explanation in claim 3).

Therefore, taking the combined teachings of Bahl, Tsirtsis, Ohtani, Bahl486, Lin, and Hamasaki as a whole, it would have been obvious to one of ordinary skill in this art of the time of invention by Applicant to incorporate the network device of a wireless communication terminal detects abnormal communication of the wireless access network suggested by Ohtani for the advantages of detecting errors at various network element levels to improve overall efficiency.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSEPH DEAN, JR whose telephone number is (571)270-7116. The examiner can normally be reached on Monday through Friday 7:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost can be reached on 571-272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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